

WHAT IS CLAIMED IS:

1. A vapor heat insect killing apparatus for a Mediterranean fruit fly, an orange small fruit fly, a Queensland fruit fly and a melon fruit fly or the like, wherein,

5 a plurality of fruit storing units for storing pallets having some fruits stored therein are arranged in a fruit processing chamber;

air conditioner chambers provided with a heat exchanging means and a forced circulating means are communicated for every one of a plurality of fruit storing units;

10 a plurality of air circulation units for independently and forcedly air blowing air from below to each of the fruit storing units are constituted;

each of the air circulating units is provided with a vapor supplying means for saturated vapor and the like, a fruit central temperature sensing means for sensing a temperature at the center of the fruits, a temperature sensing means for sensing a temperature, and a relative humidity sensing means for sensing a relative humidity;

15 and the relative humidity of the saturated vapor passing in each of the fruit storing units can be controlled while controlling a vapor supplying amount by the vapor supplying means and a heat exchanging rate of the heat exchanging means in response to the detected signal of the fruit central temperature sensing means for every each of the air circulating units.

20 2. The vapor heat insect killing apparatus for a Mediterranean fruit fly, an orange small fruit fly, a Queensland fruit fly and a melon fruit fly or the like according to Claim 1, wherein

25 said vapor supplying means and the heat exchanger means are controlled in reference to a sensed signal of the fruit temperature sensing means in the case that an increasing in temperature of the fruit central temperature in a certain fruit storing unit is delayed as compared with an increasing in temperature of the fruit central temperature in another fruit storing unit, a relative humidity of the saturated vapor passing in the fruit storing units storing the fruits where the increasing in temperature
30 of the fruit central temperature is delayed is increased so as to cause the fruit central temperature to be made fast.

3. The vapor heat insect killing apparatus for a Mediterranean fruit fly, an orange small fruit fly, a Queensland fruit fly and a melon fruit fly or the like, wherein a plurality of fruit storing units for storing pallets having some fruits installed therein are arranged within the fruit processing chamber;

5 the air conditioner chambers provided with the heat exchanging means and the forced circulation means are communicated with the fruit-processing chamber;

 and at the same time an air blower means for flowing air from below in each of the fruit-storing units is arranged in each of the fruit storing units to enable the vapor to forcedly circulate in each of the fruit storing units and the air conditioner chambers;

10 said fruit processing chambers are provided with a saturated vapor supplying means, a temperature sensing means for sensing a temperature and a relative humidity sensing means for sensing a relative humidity;

 each of the fruit-storing units is provided with a fruit central temperature sensing means for sensing a temperature of the center of the fruits;

15 and in the case that an increasing in temperature of the fruit central temperature sensing means arranged at each of the fruit storing units is delayed more as compared with an increasing in temperature of the fruit central temperature in another fruit storing unit, the air blower means for flowing air is controlled in response to the sensing signal of the fruit temperature sensing means, a feeding amount of the
20 saturated vapor flowing in the fruit storing unit having the delayed increasing in temperature of the fruit central temperature is increased to cause the increasing in the fruit central temperature to be made fast.